

ABSTRACT

Dynamically brightening the color of a displayed image through modifications to a graphics color look-up table with a corresponding decrease in backlight intensity can result in a displayed image that is comparable in quality to the original image. An image brightness histogram can be used to detect and respond to meaningful changes in the displayed image. The brightness histogram uses a set of hardware registers to store a number of pixels in the image corresponding to various brightness values. Under certain conditions the number of pixels in an image can exceed the number that can be stored in a register, one or more registers may fail to provide a proper indication of the number of pixels that correspond to a particular brightness causing register saturation. Excess pixel data is reassigned to neighboring registers until the previously saturated register is no longer saturated.